

ABRASIVE-FREE CHEMICAL MECHANICAL POLISHING COMPOSITION
AND POLISHING PROCESS CONTAINING SAME

ABSTRACT

5 The present invention relates generally to a chemical mechanical polishing
composition for polishing a metal, a metal oxide, and/or a metal nitride layer of a substrate,
which composition is substantially free of abrasive particles and comprises: a hydroxylamine
derivative; a corrosion inhibitor; and water, wherein water comprises the majority of the
composition. The composition may optionally include, or alternately be substantially free
10 from, one or more of the following: hydroxylamine, acid and/or base to adjust pH, two
carbon atom linkage alkanolamine compounds, quaternary ammonium salts, chelating agents,
organic solvents, non-hydroxyl-containing amine compounds, surfactants, additional
oxidizing agents, and non-abrasive additives. A process for chemically mechanically
polishing a substrate using such a polishing composition is also provided herein.

15